

**REMARKS**

A new **FIGURE 2** of the drawing is submitted, the specification and claims 1-3 and 5 have been amended, and new claims 72-75 have been added. Explanation of support for the amendments made to claims 1 and 3 and the newly added claims 72-75 can be found at the end of the instant amendment.

Applicants respectfully request further examination and reconsideration of claims 1-9 and 72-75 now pending in the application.

If the specification and/or claims should require any further amendment, the kind assistance of the Examiner in entering an Examiner's Amendment would be gratefully appreciated.

The last Office Action mailed from the Patent Office on November 18, 2004 has been carefully considered and indicates that:

- a) Claims 10-71 are withdrawn from further consideration pursuant to 37 CFR § 1.142(b);
- b) The drawings are objected to;
- c) The title of the invention is objected to as being not descriptive;
- d) Claims 1-5 are objected to;
- e) Claims 1-5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Graham; and

f) Claims 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Graham in view of Keller.

In response to the Examiner's objection to the drawing, applicants submit herewith a new **FIGURE 2** containing labels, for the review and approval of, and as required by, the Examiner

In view of the submission herewith of a new **FIGURE 2** containing labels, applicants respectfully submit that the Examiner's grounds for the objection to the drawing are no longer applicable and applicants therefore respectfully request that the Examiner withdraw this objection.

In response to the Examiner's objection to the title of the invention as being not descriptive, applicants have amended the specification by replacing the paragraph beginning on line 1 of page 1 thereof with **RETROREFLECTIVE MATERIALS METHOD FOR CHROMA-KEYING IN WHICH A COLORED BACKDROP IS DEPLOYED WITH RETRO-REFLECTIVE ELEMENTS** as so graciously suggested by th Examiner so that the title of the invention will be descriptive.

In view of the amendment made *supra* to the specification by replacing the paragraph beginning on line 1 of page 1 thereof with **RETROREFLECTIVE MATERIALS METHOD FOR CHROMA-KEYING IN WHICH A COLORED BACKDROP IS DEPLOYED WITH RETRO-REFLECTIVE ELEMENTS**, applicants respectfully submit that the Examiner's grounds for the objection to the title of the invention as being not

descriptive are no longer applicable and applicants therefore respectfully request that the Examiner withdraw this objection.

In response to the Examiner's objection to claims 1-5, applicants have amended claim 1, line 1, claim 2, line 2, and claim 5, line 1, to change “**colour**” to --color--, as required by the Examiner.

In view of the amendments made *supra* to claim 1, line 1, claim 2, line 2, and claim 5, line 1, to change “**colour**” to --color--, applicants respectfully submit that the Examiner's grounds for the objection to claims 1-5 are no longer applicable and applicants therefore respectfully request that the Examiner withdraw this objection.

In response to the Examiner's rejection of claims 1-5 under *35 U.S.C. § 102(b)* as being anticipated by Graham, applicants have:

1. Amended claims 1 and 3 to better define the present invention.
2. Added new claims 72-75 to further define the present invention.

Pursuant to *37 CFR § 1.111(c)*, amended claims 1 and 3 define the following advantageous distinctive features, respectively, that distinguish over and avoid the prior art:

“the angle subtended at the backdrop between the camera axis and the light source or sources is between 5 and 45 degrees”[amended claim 1]  
[Emphasis added]

“the angle subtended at the backdrop between the camera axis and the light source is between

5 and 45 degrees”[amended claim 3][Emphasis added]

In contradistinction, Graham does not teach that “the angle subtended at the backdrop between the camera axis and the light source or sources is between 5 and 45 degrees”[Emphasis added] as required by amended claim 1 and that “the angle subtended at the backdrop between the camera axis and the light source is between 5 and 45 degrees”[Emphasis added] as required by amended claim 3, *i.e.*, that the light source(s) should principally not be co-incident with the camera axis, but rather Graham teaches that the light from the source(s) should be co-incident or nearly co-incident with the camera axis, as discussed at page 5, lines 26-28 and at page 6, lines 1-3 of Graham [relied upon by the Examiner] where it is disclosed:

“Preferably the light source(s) and the camera axis subtend an angle of less than about 5 degrees and more preferably of the order of about 1 degree over a major portion of the background. The more nearly co-incident, the more effective should be the reflection back to the camera.”[Emphasis added]

In view of the amendments made *supra* to claims 1 and 3 to better define the present invention, the addition of new claims 72-75 to further define the present invention, and the arguments presented *supra*, applicants respectfully submit that the Examiner’s grounds for the rejection of claims 1-5 under 35 U.S.C. § 102(b) as being anticipated by Graham are no longer applicable and applicants therefore respectfully request that the Examiner withdraw this rejection.

In response to the Examiner's rejection of claims 6-9 under 35 U.S.C. § 103(a) as being unpatentable over Graham in view of Keller, applicants respectfully submit that in view of the Examiner's comments in the first full paragraph on page 5 of the Office Action, *i.e.*, "Keller teaches on column 2, lines 64-67...“, it would appear that the Examiner intended to cite U.S. Patent Number 5,923,400 to Spector instead of Keller since the referenced text does not appear in Keller but does appear in Spector. Accordingly, applicants will address the rejection to include Spector instead of Keller.

Pursuant to 37 CFR § 1.111(c), claims 6 and 8 define the following advantageous distinctive features, respectively, that distinguish over and avoid the prior art:

"at least partially covering the subject to be masked with material comprising retroreflective elements"[claim 6][Emphasis added]

"at least partially masking the manipulating subject(s) and/or a device(s) with material comprising retroreflective elements"[claim 8]  
[Emphasis added]

In contradistinction, Spector does not teach "at least partially covering the subject to be masked with material comprising retroreflective elements"[Emphasis added] as required by claim 6 and "at least partially masking the manipulating subject(s) and/or a device(s) with material comprising retroreflective elements"[Emphasis added] as required by claim 8, but rather Spector teaches a cartoon animation system whereby a blue screen matt cinematography system is used with actors enveloped head-to-toe in a blue-dyed body suit and having painted on the front and rear surfaces of the body suit in colors other than blue a drawing of the cartoon character and wherein animation is imparted in real-time by the actor's movements, as discussed at col. 2, lines 38-49 of Spector where it is disclosed:

“Briefly stated, these objects are attained by a technique for producing an animated film whose cartoon characters and their movements are impersonated by living actors. The scenes of the film are shot by a blue-screen matte cinema-photography system adapted to exclude blue surfaces from the camera filming the cartoon character. The cartoon character seen by the camera is created by a living actor enveloped head-to-toe in a blue-dyed body suit that renders the actor invisible to the camera. Painted on the front and rear surfaces of the body suit in colors other than blue is a drawing of the cartoon character, animation being imparted thereto in real time by the actor's movements.”[Emphasis added]

As detailed at pages 22 and 23 of the original application of the present invention, and in particular at the final paragraph on page 2 of the application cited *infra*, the advantageous distinctive features of claims 6 and 8 discussed *supra* provide for improved performance of studio background materials by providing a uniformity of normalized gain due to the use of the retroreflective materials:

“The present invention provides retroreflective studio background material, and methods for using and making the same, which have improved performance, in terms of uniformity of normalised [sic] gain, and which are easier to make, as well as being more versatile.”  
[Emphasis added]

The use of the retroreflective materials of claims 6 and 8 discussed *supra* ensures a uniformity of reflection of light. Simply using the blue-dyed suit of Spector would result in the suit varying in intensity of reflected light over its overall 3-D shape according to, e.g., folds in the material and shadows being cast. This lack of uniform reflectivity of Spector means that chromakeying done using actors in such suits would result in shadows/ghosting in the

chromakeying and badly chromakeyed images which yield unsuitable/unacceptable results. The advantageous distinctive features of claims 6 and 8 discussed *supra* are therefore distinct from Spector insofar as they require that the subject being masked is covered with material comprising retroreflective elements as opposed to the blue-dyed suit of Spector. The use of the retroreflective materials of claims 6 and 8 in order to effect, *e.g.*, uniformity in puppetry, *etc.*, is neither suggested nor disclosed by the cited references, particularly Graham, Keller, and Spector.

In view of the arguments presented *supra*, applicants respectfully submit that the Examiner's grounds for the rejection of claims 6-9 under 35 U.S.C. § 103(a) as being unpatentable over Graham in view of Keller [sic Spector] are no longer applicable and applicants therefore respectfully request that the Examiner withdraw this rejection.

Support for the amendments made to claims 1 and 3, *i.e.*, respectively, "the angle subtended at the backdrop between the camera axis and the light source or sources is between 5 and 45 degrees"[amended claim 1][Emphasis added] and "the angle subtended at the backdrop between the camera axis and the light source is between 5 and 45 degrees"[amended claim 3][Emphasis added] can be found at page 20, lines 13-14 of the application as originally filed, where it is disclosed:

"The angle subtended, at the backdrop, between the camera axis and the axis of the source of illumination may be within the range of more than 5 degrees up to 45 degrees...."[Emphasis added]

Therefore, the amendments made to claims 1 and 3 do not constitute new matter.

Support for the newly added claims 72-75 can be found at page 20, lines 13-15 of the application as originally filed, where it is disclosed:

“The angle subtended, at the backdrop, between the camera axis and the axis of the source of illumination may be within the range of...10 to 45 degrees and...10 to 25 degrees.”[Emphasis added]

Therefore, newly added claims 72-75 do not constitute new matter.

The prior art made of record and not relied upon has been duly noted and carefully considered.

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objections and rejections are respectfully requested. Allowance of claims 1-9 and 72-75 at an early date is earnestly solicited.

Respectfully,

By:   
CHARLES E. BAXLEY  
Attorney of Record  
USPTO Reg. 20,149

90 John Street - Suite 309  
New York, New York 10038  
Tel: (212) 791-7200  
Fax: (212) 791-7276  
e-mail: [ceb@hartbaxley.com](mailto:ceb@hartbaxley.com)

Dated: New York, NY

**In the Drawing:**

A new **FIGURE 2** containing labels is submitted.